

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
28 March 2002 (28.03.2002)

PCT

(10) International Publication Number
WO 2002/025445 A3

(51) International Patent Classification⁷: **G06F 17/30**, 3/06

(21) International Application Number:
PCT/IB2001/001725

(22) International Filing Date:
19 September 2001 (19.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/665,065 19 September 2000 (19.09.2000) US

(71) Applicant (for all designated States except US): **KOM, INC.** [CA/CA]; 4019 Carling Avenue, Kanata, Ontario K2K 2A3 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SHAATH, Kamel** [CA/CA]; 149 McCurdy Drive, Kanata, Ontario K2L 2Z7 (CA). **FU, Yaqun** [CA/CA]; 59 Bayshore Drive, #15, Nepean, Ontario K2B 7G8 (CA). **PARTHASARATHY, Vinay** [IN/CA]; 2811 Richmond Road, Ottawa, Ontario K2B 8J5 (CA). **JELVIS, Alexei** [RU/CA]; 10-73 Woodbridge Crescent, Nepean, Ontario K2B 7T2 (CA). **LIYANSKY, Abel, L.** [AR/CA]; 219-2055 Carling Avenue, Ottawa, Ontario K2A 1G6 (CA).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

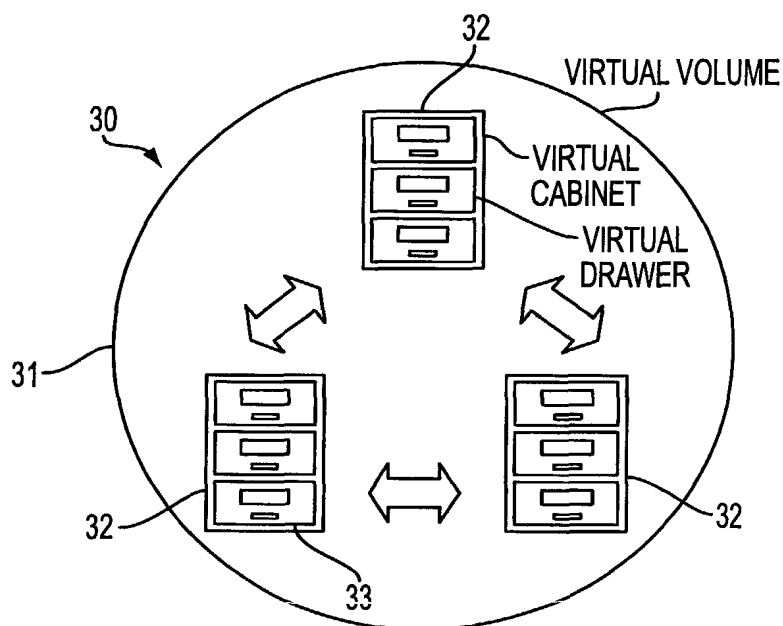
- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
31 December 2003

(15) Information about Correction:

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR ELECTRONIC FILE LIFECYCLE MANAGEMENT



(57) Abstract: A method and system for managing a file lifecycle is disclosed. The method incorporates a virtual file cabinet having virtual drawers. Files are moved from drawer to drawer throughout their lifecycle in accordance with policies associated with each drawer. The files are moved automatically and as such, a file's lifecycle is managed from file creation to file deletion in an automated fashion. By using an archiving device such as magneto optical storage media, the files are automatically moved to their final archived location in an archiving drawer once certain policies of their present drawer are met. The system is an electronic system employing the inventive method.

WO 2002/025445 A3



Previous Correction:

see PCT Gazette No. 19/2003 of 8 May 2003, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT, ... 01/01725

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F17/30 G06F3/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BAIRD R ET AL: "Distributed Information Storage Architecture" MASS STORAGE SYSTEMS, 1993. PUTTING ALL THAT DATA TO WORK. PROCEEDINGS., TWELFTH IEEE SYMPOSIUM ON MONTEREY, CA, USA 26-29 APRIL 1993, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 26 April 1993 (1993-04-26), pages 145-155, XP010095431 ISBN: 0-8186-3460-X * whole document *	1-5
Y	---	6-13, 38-46
	-/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

30 July 2003

Date of mailing of the international search report

30. 10. 03

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Wienold, N

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FOSTER A ET AL: "Renaissance: managing the network computer and its storage requirements" PROCEEDINGS OF THE SYMPOSIUM ON MASS STORAGE SYSTEMS. MONTEREY, OCT. 7 - 10, 1991, LOS ALAMITOS, IEEE COMP. SOC. PRESS, US, vol. SYMP. 11, 7 October 1991 (1991-10-07), pages 3-10, XP010023552 ISBN: 0-8186-2155-9	1-5
Y	* whole document *	6-13, 38-46

X	EP 0 515 073 A (HEWLETT PACKARD CO) 25 November 1992 (1992-11-25)	1-5
Y	* abstract * column 1, line 3 - line 9 column 2, line 3 -column 3, line 22	6-13, 38-46

X	BEDOLL R ET AL: "The importance of metadata in mass-storage systems" MASS STORAGE SYSTEMS, 1990. CRISIS IN MASS STORAGE. DIGEST OF PAPERS., TENTH IEEE SYMPOSIUM ON MONTEREY, CA, USA 7-10 MAY 1990, WASHINGTON, DC, USA,IEEE COMPUT. SOC. PR, US, 7 May 1990 (1990-05-07), pages 111-116, XP010018687 ISBN: 0-8186-2034-X	1-7
Y	page 112, left-hand column, line 1 -right-hand column, last line	8-13, 38-46

X	LANZATELLA T W ET AL: "Storage management issues for Cray Research" MASS STORAGE SYSTEMS, 1990. CRISIS IN MASS STORAGE. DIGEST OF PAPERS., TENTH IEEE SYMPOSIUM ON MONTEREY, CA, USA 7-10 MAY 1990, WASHINGTON, DC, USA,IEEE COMPUT. SOC. PR, US, 7 May 1990 (1990-05-07), pages 176-181, XP010018699 ISBN: 0-8186-2034-X	1-5
Y	* paragraph 'Current Capabilitis' *	6-13, 38-46

INTERNATIONAL SEARCH REPORT

Int ional application No.
PCT/IB 01/01725**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-13, 38-46

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-13, 38-46

managing a file lifecycle whereas the file is stored on a storage medium. Policies are used for controlling file migration (claims 1-7). More particularly, claims 8-13 and 38-46 define the storage medium as a virtual storage medium having a plurality of storage media and having a set of policies relating to storage locations within the storage media. Actions are determined from policies and the actions are performed on the stored files.

2. Claims: 14-37, 47-59

managing a file lifecycle whereas the files are stored in virtual drawers, associated with storage media, or virtual cabinets in a virtual volume. Policies for the virtual drawers or the virtual cabinets determine actions (e.g. storing at a physical location) which are performed on the files.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT, -- 01/01725

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0515073	A	25-11-1992	US	5313631 A	17-05-1994
			DE	69224678 D1	16-04-1998
			DE	69224678 T2	02-07-1998
			EP	0515073 A2	25-11-1992
			JP	5158770 A	25-06-1993
